Université Concordia University

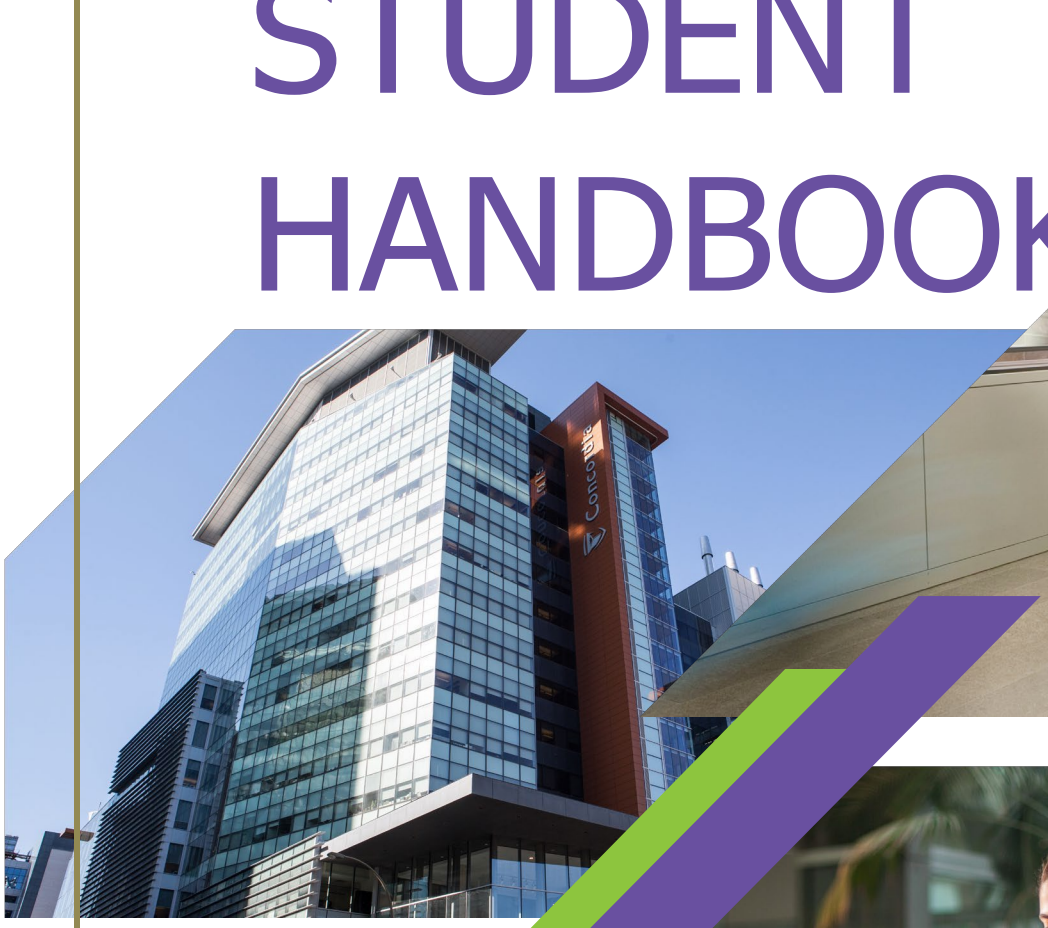
FACULTY OF ARTS AND SCIENCE

Master of / Magistrate In Science / Doctorate

Geography, Urban and Environmental Studies

Department of Geography, Planning and Environment

STUDENT HANDBOOK



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1 CONSULTATION

Graduate Program Director: Dr. Pascale Biron
pascale.biron@concordia.ca

The Graduate Program Director (GPD) is responsible for, and makes decisions regarding, all academic and administrative matters affecting graduate students. The GPD is also available to mentor and assist students who require academic advice. Students may meet with the GPD to discuss any matter relating to the M.Sc. and Ph.D. programs and their academic progress. Appointments can be made via email.

Graduate Program Assistant: Jennifer Srey
jennifer.srey@concordia.ca

The Graduate Program Assistant (GPA) assists with registration and performs all administrative and admission duties for the department's graduate students. The GPA follows the student's progress throughout their residency, maintains and updates all graduate student files, and notifies the Graduate Program Director of any potential problems. The GPA advises students regarding academic deadlines, procedures and awards, arranges thesis proposals, comprehensive exams and thesis defences, and prepares student requests on behalf of graduate students. The GPA answers general questions students might have about the programs and consults the Graduate Program Director when necessary. Students can make in person or online appoints to meet with the GPA at any time during their studies.

2 M.SC. AND PH.D. PROGRAM OBJECTIVES

The M.Sc. and Ph.D. programs are designed to provide students with the theoretical foundations and methodological tools necessary to contribute to the understanding of human and environmental systems. Through an emphasis on both specialization and interdisciplinary perspectives, students are given the opportunity to carry out in-depth research work in any of the Department's areas of specialization covering three broad categories of environment: the natural or biophysical environment; the human, cultural or behavioural environment; and the urban, built or designed environment. In addition to contributing to the advancement of knowledge, students will be well placed to enter a wide range of careers in environmental, urban planning and public policy fields.

3 ADMISSION REQUIREMENTS

3.1 M.SC.

The normal requirements for admission into the M.Sc. are a minimum GPA of 3.30/4.33 ("B+" average or better) in a B.A. or B.Sc. program in Geography, Urban Planning, Environmental Science, or a related field of study from a recognized university. Applicants are selected on the basis of a sound undergraduate academic record, strong letters of recommendation, and a convincing statement of purpose which clearly describes their academic interest in the program and intended area of research. In addition, admission is contingent on the availability of an appropriate faculty member from within the GPE Department to serve as research supervisor. Some applicants with deficiencies in their undergraduate preparation may be required to take a qualifying program. Others may be required to complete certain prerequisite courses in addition to the regular graduate program.

3.2 PH.D.

The normal requirement for admission into the Ph.D. is a M.A. or M.Sc. in Geography, Urban Planning, Environmental Science, or a related field of study from a recognized university. Applicants are selected on the basis of a sound academic record, strong letters of recommendation, and a convincing statement of purpose which clearly describes their academic interest in the program and intended area of research. In addition, admission is contingent on the availability of an appropriate faculty member from within the GPE Department to serve as research supervisor.

It is also possible for students currently registered in our Department's M.Sc. program to apply for permission to fast-track directly to doctoral studies. This fast-track option is reserved for exceptional students who have demonstrated outstanding research potential during the first year of their M.Sc. program, and requires the recommendation of their supervisor and other faculty members from within the Department of Geography, Planning and Environment.

Language Proficiency Requirements for all Degrees

The language of instruction at Concordia is English.

Any student, whose first language is other than English, must demonstrate proficiency in English. Several proficiency tests are accepted; among them the Test of English as a Foreign Language (TOEFL,) the International English Language Testing System (IELTS) and Duolingo English Test (DET.) The minimum score for TOEFL is 95, with no part under 20. The minimum score for IELTS is 7.0, with no band score under 6.5. The minimum score for DET is 125, with no parts under 110. Additional information on other accepted tests and their scores can be found here:

http://www.concordia.ca/admissions/graduate/requirements/english-language-proficiency.html

4 ACADEMIC REGULATIONS

GPA Maintenance Requirement. The academic progress of students is monitored at the end of each term. To continue in the program, students must remain in good academic standing, which is to maintain an assessment grade point average (AGPA) of at least 3.00 on a minimum of 12 credits. Students whose AGPA falls below 3.00 are considered to be on academic probation. Students whose AGPA falls below 3.00 for any two review periods are considered to be in failed standing.

C Rule. Graduate students who receive a grade of C during the course of their studies will be required to attend a review with the Graduate Program Director. The decision as to whether or not the student will continue in the program, rests with the Program Director. After the aforementioned meeting, if a continuation is granted, a request will be made to the School of Graduate Studies. Students who receive more than one C grade during the course of their studies will be withdrawn from the program.

Students who have been withdrawn may apply for re-admission. Students who receive another C after re-admission will be withdrawn from the program and will not be considered for re-admission.

F Rule. Students who receive a failing grade in the course of their studies will be withdrawn from the program unless a continuation in the program is requested by the Program Director and approved by the Dean of Graduate Studies. If withdrawn, students may apply for re-admission. Students who receive another failing grade after re-admission will be withdrawn from the program.

Duration of Programs. It is expected that full-time students will complete the requirements for most master's/magisteriate degree programs within 6 terms (2 years). The expected time to completion for a doctoral degree for full-time students is 12 terms (4 years).

Time Limit. Program time limits indicate the maximum program duration specified by the university. The time limit for a master's/magisteriate degree for full-time students is 9 terms (3 years), and for part-time students is 15 terms (5 years). The time limit for a doctoral degree is 18 terms (6 years) of full-time study or 24 terms (8 years) of part-time study. A change of status once you have begun your degree does not equate to additional terms within your time limit. The number of terms remaining will be calculated by the Office of the Registrar and pro-rated.

Every effort should be made to complete a thesis within the time limit provided. In exceptional circumstances a time limit extension may be requested, and upon recommendation of the GPD and approval of the School of Graduate Studies, short extensions may be permitted.

Graduation Requirement. In order to graduate, students must have a cumulative GPA of at least 2.70.

5 M.SC. PROGRAM REQUIREMENTS

1. **Total program requirement**: 45 credits
2. **Residence.** The minimum residence requirement is one year (three semesters) of full-time graduate study, or the equivalent in part-time study.
3. **Courses.** All students must take the following:
   9 credits: HENV 605 or HENV 610, HENV 615, HENV 685.
   6 credits in elective courses chosen from: GEOG 620, GEOG 625, HENV 620, HENV 625, HENV 630, HENV 635, HENV 640, HENV 645, HENV 650, HENV 655, HENV 660, HENV 665, HENV 670, HENV 675, HENV 680, HENV 690.
4. **Thesis.** HENV 695 (30 credits).

5.1 THESIS COMMITTEE

A thesis committee must be formed by February of the first year in the program, and the student must provide the Graduate Program Director and the Graduate Program Assistant with the information regarding the makeup of the committee membership.

The committee is comprised of three members: the supervisor, and two other members who can contribute to the appropriate training of the student in the field of study. If there is a co-supervisor, the committee will have four members (two supervisors and two other members). Normally, not more than one thesis committee member should be from another department and/or university. A member from outside the university would normally hold a Ph.D. degree.

The role of the thesis committee is:

1) To evaluate the thesis proposal (HENV 685). This is a Pass/Fail course. The student must submit a written thesis proposal (a sound rationale for the proposed research, a detailed description of the research design and methodology, and a comprehensive literature review) which will be evaluated by all members of the thesis committee. After the written part of the proposal has been accepted by the committee, the student will present orally their proposal to the committee.

2) To evaluate the final thesis and the oral defence. The defence committee should be comprised of the supervisor and one of the two thesis committee members, in addition to an external examiner who has not previously been exposed to the student’s research.

5.2 NORMAL SEQUENCING OF THE TWO-YEAR PROGRAM FOR A FULL-TIME STUDENT

Year 1

Early September:	First meeting of research proposal seminar (HENV 615)
Fall term:	Student will take core methodological course (HENV 605 or HENV 610) and ideally at least one of the elective courses in order to have more time to work on the thesis proposal during the winter term.
Winter term:	Student will typically complete remaining elective course(s).
Mid-January:	Student to submit the literature review of the thesis proposal in HENV 615.
February:	Student submits to GPA and GPD the names of their thesis committee members.
March-April:	Oral presentations of the thesis proposal are scheduled in HENV 615. Written thesis proposal is submitted to supervisor for first approval.
April-May:	Written part of the thesis proposal circulated to thesis committee. Once approved, a meeting with the thesis committee is scheduled, where student presents orally for about 15 minutes, followed by questions and discussion with the thesis committee to provide feedback on thesis proposal to ensure that student is on the right track for data collection and analysis. The time allotted to the committee meeting is normally 1 hour.
Summer:	Student can begin research activities immediately following approval of the thesis proposal by the thesis committee. Students will typically work full time on research activities from this time, until the research is completed.

Year 2

Fall semester:	The student will typically be in the completion stages of research, and can begin writing up results for the thesis.
Spring semester:	For Spring convocation, the final draft of the thesis must be submitted by March 4. The thesis must be successfully defended, revised and submitted in final form by April 1.
Summer semester:	For Fall convocation, the final draft of the thesis must be submitted by August 4. The thesis must be successfully defended, revised, and submitted in final form by September 1.

6 PH.D. PROGRAM REQUIREMENTS

1. **Total program requirement**: 90 credits
2. **Residence.** The minimum period of residence is two years (six terms) of full-time graduate study beyond the master's degree or three years (nine terms) of full-time graduate study (or the equivalent in part-time study) beyond the bachelor's degree for those students who are permitted to enroll for doctoral studies without completing a master's degree.
3. **Courses.** All students must take the following:
   9 credits: HENV 801, HENV 802, HENV 805.
   6 credits in elective courses chosen from: HENV 605, HENV 610, HENV 620, HENV 625, HENV 630, HENV 635, HENV 640, HENV 645, HENV 650, HENV 655, HENV 660, HENV 665, HENV 670, HENV 675, HENV 680, or HENV 690.
4. **Thesis Proposal.** HENV 810 (3 credits).
5. **Comprehensive exam.** HENV 885 (6 credits).
6. **Research and Thesis.** HENV 895 (66 credits).

6.1 FAST-TRACKING FROM M.SC. PROGRAM

Upon recommendation by full-time faculty members of the Department of Geography, Planning and Environment, students enrolled in the Master of Science in Geography, Urban and Environmental Studies at Concordia University who have excelled in their M.Sc. coursework, and who have also shown substantial evidence of outstanding performance in research (for example, holding a competitive grant [SSHRC/NSERC, FRQSC/FRQNT or a similar type of funding]) may apply for permission to proceed directly to doctoral studies without submitting a master's thesis (fast-tracking). A candidate entering the doctoral program under accelerated admission (fast-tracking) from the M.Sc. program will normally have completed their M.Sc. coursework and may have elective courses taken during their M.Sc. transferred to their Ph.D. program.

6.2 THESIS COMMITTEE

A thesis committee must be formed by February of the first year in the program, and the student must provide the GPD and the GPA with the information on the members of their thesis committee. The committee is comprised of three members: the supervisor, and two other members who can contribute to the appropriate training of the student in the field of study. If there is a co-supervisor, the committee will have four members (two supervisors and two other members). Usually, one thesis committee member is based in another department and/or university. A member from outside the university would normally hold a Ph.D. degree.

The role of the thesis committee is:

1) To provide guidance on the thesis research.

2) To define, with the supervisor(s), the knowledge areas for the comprehensive exam, and to draft comprehensive exam questions in these areas (see section on Comprehensive exam below).

3) To evaluate the thesis proposal (HENV 810) and comprehensive exam (HENV 885).

4) To evaluate the final thesis and the oral defence, along with two additional thesis examiners: one internal examiner from a different department at Concordia, and one external examiner from a different university.

6.3 COMPREHENSIVE EXAM AND THESIS PROPOSAL

General Structure of the Comprehensive Examination

The comprehensive exam is normally completed in the fall term of the 2nd year of the program and must be completed within 2 years from entry into the doctoral program. The student along with their supervisor (and thesis committee) will agree on the precise schedule of the Doctoral Comprehensive exam and inform the Graduate Program Assistant of the agreed upon schedule.

The comprehensive exam committee consists of the thesis committee. The committee prepares a comprehensive exam consisting of one or two questions related to the declared topic (the thesis field), and another one or two questions for each of two cognate fields. Cognate fields are defined broadly here as areas of knowledge that will aid the student to situate her/his research within a broader disciplinary and/or heuristic and/or epistemological context. Those fields are important to the student's more general training; they may or may not link directly to the thesis topic.

The comprehensive examination consists of a written and oral component. To set the comprehensive exam process in motion, the student in consultation with their supervisor should define the comprehensive exam fields (i.e. the thesis and two cognate fields) and compile a list of readings. The suggested number of readings is 60-80 articles in total, with one book being equivalent to four articles. The supervisor and student should consult the other members of the thesis committee as needed in this process. The exam should be scheduled within three months of the student receiving a confirmed reading list.

Based on the agreed upon fields for the reading list, each committee member sends one or two (depending on the selected exam model as described below) exam questions to the supervisor. The supervisor will then assemble the questions received from committee members as well as their own questions for a total of 3 or 6 questions (1 or 2 questions per field). This set of questions is then submitted to the GPA.

On the day/time scheduled to begin the written component of the exam, the GPA will send the relevant questions to the student, with a copy to the GPD, supervisor and thesis committee members. This step formally triggers the initiation of the written component of the exam (more details on the format of the written comprehensive exam further below). The student is responsible for being available for the scheduled period of the exam. This includes making arrangements with work and family, so that they can dedicate as much time as possible to writing the exam. In cases where students anticipate that they will have difficulty making such arrangements (e.g. for reasons of childcare), they must consult with their supervisor in advance of the writing period to discuss and, if necessary, modify the standard timeline. Once the student receives the exam questions, they must choose the questions to answer (see further information below about exam format). While undertaking the exam, they must adhere to the Academic Code of Conduct: https://www.concordia.ca/artsci/students/academic-integrity.html
This includes refraining from seeking assistance from the supervisor or anyone else. The expectation is that the written work submitted for the comprehensive exam is the student's own work and that all other sources are fully acknowledged, consistent with scholarly convention. The supervisor of the student is responsible for supporting the student (morally and logistically), including assisting where possible to provide relief from other tasks, such as RA work, during the period of the exam. The supervisor is not, however, permitted to provide the student with any ideas or leads related to the comprehensive exam.

All committee members are expected to assess the exam in its entirety and be prepared to ask questions at the oral comprehensive examination. At the oral comprehensive examination, which is scheduled in a time slot of 90 minutes and within three weeks of the essays being submitted, the student answers one or two rounds of questions about the submitted essays and the questions that were not answered. Following these questions, the examination committee meets in camera to assess the student's performance. At this stage, a pass/fail grade is assigned for the comprehensive exam (HENV 885), considering both the written and oral components of the exam. In addition, the

committee will complete a Comprehensive Exam Evaluation form that provides a qualitative ranking of the oral and written components of the exam as well as a brief written critique. This form is submitted to the Graduate Program Assistant, and may be used within the Department for internal awards and fellowships.

If the majority of examiners decide not to pass the student, they must arrive at a consensus on the student's performance and review the options: either failing the student, or requesting additional examination material from the student. In the latter case, the committee will provide feedback to the student followed by a request for additional written work. The deadline for the extra work is at the discretion of the committee, but the timeframe should not exceed three weeks. The examination committee will then meet to reassess the grade for the exam.

Comprehensive Examination Models

With regards to the precise format of the exam, there are two possible models from which the student, in consultation with their supervisor, can select. Each model is outlined below.

Model 1: The Three-Essay Model

In the case of the three-essay model, the student is responsible for being able to respond to all 6 questions provided by the thesis committee (2 questions per field). For the written component, they must select one question from each set (Thesis; Cognate 1; Cognate 2) on which they will prepare and submit an essay. Each essay should be approximately 3000 words or less. The student will generally have 3 days (72 hours) to complete each essay (9 days in total for 3 essays), with the timing of the first essay beginning from the moment of reception of the first set of questions (e.g. when 2 questions relating to the thesis topic are sent to the student, this will trigger the first 72-hour essay). Accommodation in terms of the time-frame of the exam can be made, if the supervisor, in consultation with the student, identifies a need for it. This accommodation is at the discretion of the GPD. Given the condensed timeline for the writing of these essays, students will be evaluated primarily on the content of the essays, rather than on the quality of the writing itself. There should be no more than one week of break-time between the writing of each of essay. Each essay is submitted to the Graduate Program Assistant after the 72-hour period. Note that the student is responsible for answering questions pertaining to the full set of 6 questions in the oral component of the exam.

Model 2: The Review Article Model

In this case, the student receives 3 questions, which can be positioned in relation to each field (i.e. one question per field) or which can integrate the literature across the three exam fields. The expectation is that the questions will be of broader scope suitable for a more in-depth review article that draws on the literature from the complete reading list. As in Model 1, the student is responsible for being able to respond to all three questions during the oral examination. For the written component, they must select one question from the set of three questions on which they will prepare and submit a review article of approximately 7500 words. The student will have four weeks to complete the review article, and it will be submitted to the Graduate Program Assistant.

The review article should be of sufficient quality and scope that it shows potential to be suitable for publication in the peer-reviewed literature. As described by the multi-disciplinary journal *FACETS*, a review article presents "a critical synthesis or overview of information on an important topic." Some review articles can also include a new analysis of previously published data (a meta-analysis) in which the article is able to infer new results and conclusions that emerge from a previously published body of literature. For a detailed description of this type or review article, please see the description provided for *Environmental Research Reviews* (a recently-introduced section of the journal *Environmental Research Letters*: Environmental Research Reviews - Environmental Research Letters - IOPscience

Thesis Proposal

A detailed thesis proposal (7500 words) should normally be submitted to the thesis committee within the first 20 months of the student's program. The committee will evaluate a written thesis proposal and will hold a committee meeting, in which the student is invited to make a presentation lasting no longer than 15 minutes. After the presentation and questions from the committee, the thesis committee meets in camera to assess the student's proposal. The time allotted to the committee meeting is normally 1 to 1.5 hours. If the proposal is deemed satisfactory, it will result in a Pass grade for HENV 810. Otherwise, the committee may give feedback to the candidate followed by a request for a revised proposal, on which the final grade will be based.

The thesis proposal meeting should be completed within two months following the completion of the comprehensive examination process. In some cases (subject to the approval of the supervisor and thesis committee, and normally restricted to cases where students have well-developed research when they begin their Ph.D.), students will have the option of writing their thesis proposal in advance of the comprehensive exam process. In this case, the thesis proposal will be presented and defended to the supervisory committee at the same time as the comprehensive examination. In such cases the oral comprehensive examination would be scheduled in a time slot of 2.5 hours maximum, with the first part (90 minutes) devoted to the comprehensive exam. This is followed by an oral presentation by the student on their thesis proposal lasting no longer than 15 minutes. The committee would therefore question the student on both the comprehensive exam questions and the proposed research.

6.4 EXPERIENTIAL LEARNING (HENV 802)

One unique feature of the Ph.D. program is a 3-credit requirement for students to work for a minimum of 200 hours (either full-time or part-time) in either the private sector in a field relevant to their doctoral research, or in a research laboratory based outside Concordia University (in a non-profit organization or in the government). This should normally be completed during the second year of the program. Acquiring experience in a research laboratory in a foreign country is encouraged.

For funding, students are encouraged to use programs such as Mitacs Globalink Research Award to study abroad in a research laboratory, or Mitacs Accelerate to work with a private company or a non-profit organization (https://www.mitacs.ca/)

Please contact the GPA for the relevant forms associated with this course, which must be completed:
HENV 802 Ph.D. Experiential Learning form Prior to Start of Internship
HENV 802 Ph.D. Experiential Learning form Post-Internship

6.5 PEDAGOGICAL TRAINING (HENV 801)

Another unique feature of the Ph.D. program, is a 3-credit requirement to teach at least 4 lectures at the undergraduate level, to help ensure that each student acquires strong teaching and communication skills, which are useful for both academic and non-academic positions. Candidates are also required to attend a seminar in university teaching in collaboration with the Centre for Teaching and Learning Services of Concordia University prior to teaching the lectures.

The choice of which classes the student will teach will be made in consultation with the supervisor. In most cases, students will present in an undergraduate course taught by the supervisor, but this is not a requirement and arrangements can be made with other members of the Department, based on the expertise of the student and the content of the course.

Please contact the GPA for the relevant form that is associated with this course which must be completed by the professor overseeing the class(es):
HENV 801 Pedagogical Training Evaluation Form

6.6 NORMAL SEQUENCING OF THE PH.D. PROGRAM FOR A FULL-TIME STUDENT

Year 1

Early September:	First meeting of research proposal seminar (HENV 805)
Fall term:	Student will take one or two of the elective courses to ideally have more time to begin work on the comprehensive exams and thesis proposal during the winter term.
Winter term:	Student will take remaining elective course(s) and/or work on developing research questions and thesis proposal.
Early February:	Student to submit to GPA and GPD the names of the thesis committee members.
April:	Articulation of the research questions (within HENV 805). Oral presentations of the draft thesis proposal are scheduled in HENV 805.
May:	First meeting of the student with the thesis committee to discuss research questions and proposed activities for Year 2.
Summer:	Students work on the comprehensive exams and thesis proposal.

Year 2

Fall term:	Comprehensive exam and Thesis Proposal
Winter to summer:	Experiential Learning (HENV 802) and continuation in research

Year 3

Fall or winter term:	Pedagogical Training (HENV 801) and continuation in research
Summer:	First draft of final thesis ready, or continuation in research

Year 4.

Fall or winter term:	Submit final thesis and thesis defense. Thesis submission deadlines are February 11th and July 14th for Spring and Fall Convocation, respectively.

7 COURSE DESCRIPTIONS

7.1 REQUIRED COURSES FOR M.SC. PROGRAM

HENV 605 Advanced Qualitative Research Methods (3 credits)
This course considers some of the foundational theories that inform contemporary research in the fields of Human Geography and Urban Studies. It also explores a spectrum of qualitative research paradigms, theories and advanced methodologies relevant to social science.

HENV 610 Advanced Quantitative Research Methods (3 credits)
This course considers experimental design and advanced data analysis methods in Geography and Environmental Sciences. The course focuses on statistical analysis of quantitative data, using the R programming environment. Specific topics include data exploration and plotting, advanced statistical tests, linear regression, statistical model selection, non-parametric tests and mixed effects models.

HENV 615 Research Proposal Seminar (3 credits)
This seminar provides an opportunity to extend, deepen, and apply the conceptual and methodological frameworks presented in the core and elective courses, through a combination of classroom discussions and attendance of departmental research seminars. Students are taught research and presentation skills and are guided through the process of preparing their thesis research proposals. Presentation of the student's proposed research to his/her/their thesis committee members is a requirement for successful completion of this course. The Research Proposal Seminar will meet approximately ten times over two semesters. The first meeting will be early in September, at which the schedule for the following meetings will be determined.

HENV 685 Thesis Proposal (3 credits)
Students are required to select their research topic and formulate a research proposal under the supervision of a thesis supervisor and with input from a thesis committee. The written proposal will include a sound rationale for the proposed research, a detailed description of the research design and methodology, and a comprehensive literature review. Students are also required to present an oral presentation of their proposal to the Department. The thesis proposal must be formally approved by the thesis committee and the Graduate Program Director before research activities can begin. The thesis proposal should be completed before the end of the second semester of residency in the Program and after a minimum of 6 credits in the Program have been taken.

HENV 695 Thesis (30 credits)
Students are required to demonstrate their ability to carry out original, independent research. The thesis, which will be researched and written under the direction of a supervisor and thesis committee, should normally not exceed 100 pages and include a literature review, research objectives, methodology, analysis of findings and concluding reflections. Students also have the option to produce a research-creation thesis. The research-creation thesis is comprised of a practical component of creative production or a prototype as well as a written component of approximately 40-45 pages, which written includes a literature review (pertaining to content or format/media employed), a theoretical and methodological contextualization, a critical reflection on the research creation and its outcomes, and other areas as deemed necessary by the student and the student's thesis committee. For the research-creation, it is expected that one of the committee members specializes in the format or genre used for the creative component. A digital reproduction of the creative component must be attached to the manuscript at the time of submission. Upon completion of the thesis, the student will be required to defend their thesis before an external examiner and their thesis committee.

7.2 REQUIRED COURSES FOR PH.D. PROGRAM

HENV 801 Pedagogical Training (3 credits)
The objective of this course is to ensure that all Ph.D. students acquire strong teaching and other communication skills which are useful for both academic and non-academic positions. Candidates are required to attend a seminar in university teaching in collaboration with the Centre for Teaching and Learning Services of Concordia University. Following the successful completion of this seminar, candidates are required to give four lectures (normally 75 minutes each) to undergraduate classes. The course is graded on a pass/fail basis.

HENV 802 Experiential Learning (3 credits)
The objective of this course is to ensure that all students acquire some practical experience in their field of research. Candidates are required to work for a minimum of 200 hours (either full-time or part-time) in either the private sector in a field relevant to their doctoral research, in a research laboratory based outside Concordia University, in a non-profit organization or in the government. The course is graded on a pass/fail basis.

HENV 805 Research Proposal Seminar (3 credits)
Conceptual and methodological frameworks related to human interventions in the environment in the built, social and natural environment are examined through various student presentations and exchanges on their research topic. This course includes completion of the oral presentation of the research proposal.

HENV 810 Thesis Proposal (3 credits)
Students are required to select their research topic and formulate a thesis proposal under the supervision of a thesis supervisor and with input from a supervisory committee. The written proposal includes a sound rationale for the proposed research, a detailed description of the research design and methodology, and a comprehensive literature review. The thesis proposal is assessed by the supervisory committee and approved by the Graduate Program Director.

HENV 885 Comprehensive Exam (6 credits)
The comprehensive exam is prepared in consultation with the supervisory committee and aims to ensure that the student has a sound knowledge of three areas of concentration within his or her field of research. The examining committee consists of the supervisory committee plus one additional member of the Department of Geography, Planning and Environment and is chaired by the Graduate Program Director. The student is evaluated on the quality of the written and oral responses to questions.

HENV 895 Research and Thesis (66 credits)
A major portion of the doctoral program involves the planning and execution of innovative and original research under the direction of a supervisor or two co-supervisors. The thesis is examined by a Thesis Examining Committee and is defended orally.

7.3 ELECTIVE COURSES FOR M.SC. AND PH.D. PROGRAMS

GEOG 625 Directed Studies (3 credits)
With written permission of the graduate program director, a student studies a particular field or topic relating to geography, urban or environment studies. A detailed outline of the proposed study, approved by a study supervisor is required.
Note: Students are asked to complete the form of agreement with the chosen supervisor for this course. A link to this form in a Word format is available from departmental web page.

HENV 605 Advanced Qualitative Research Methods (3 credits)
This course considers some of the foundational theories that inform contemporary research in the

fields of Human Geography and Urban Studies. It also explores a spectrum of qualitative research paradigms, theories and advanced methodologies relevant to social science.

HENV 610 Advanced Quantitative Research Methods (3 credits)
This course considers experimental design and advanced data analysis methods in Geography and Environmental Sciences. The course focuses on statistical analysis of quantitative data, using the R programming environment. Specific topics include data exploration and plotting, advanced statistical tests, linear regression, statistical model selection, non-parametric tests and mixed effects models.

HENV 620 Sustainable Transportation (3 credits)
This advanced seminar explores the different elements of what is broadly known as sustainable transportation. It considers the importance as well as the negative impacts of transport systems, and how these are described and captured methodologically. Of critical importance is the intimate link between land-use and transportation systems.

HENV 625 Sustainable Resource Management (3 credits)
This seminar examines the impact of human activities on natural resources. Topics such as integrated management and exploitation practices, biodiversity and conservation, focusing particularly on forest and water resources from physical, chemical, biological, socio-economic, and technological perspectives are investigated

HENV 630 Theories of Society and Space (3 credits)
Human Geography is informed by a range of theories that have developed inside and outside the discipline. This course introduces students to some of the most influential of these theories as well as to theoretically-informed geographical literature. While students are exposed to foundational theories, the course focuses on critical geographical work that seeks to interpret the present moment.

HENV 635 Spatial Analysis (3 credits)
This course examines analytical methods for handling specifically spatial data, where the arrangement of observations in space is thought to be of significance. The emphasis is on the choice and application of appropriate methods for the analysis of various types of data that are encountered in Geography, Planning and Environmental Studies. Procedures for analyzing spatial distributions of phenomena, temporal dynamics and change are examined in relation to Geographical Information Systems (GIS) tools and statistical techniques.

HENV 640 (Re)shaping the City (3 credits)
By relying on an array of theoretical formulations informed by political economy, economic geography, urban morphology, urban sociology, anthropology and ecology, this seminar explores various social processes that contribute to the shaping and reshaping of our cities' material and spatial forms.

HENV 645 Behaviour and the Urban Environment (3 credits)
This course provides a basic understanding of the relationship between people and the urban environment. The focus is on the collective and individual responses of people to the built or designed environment, and the way in which these responses can be used to guide projects, plans and policies. The basic studies for the location of commercial facilities and the modelling of human spatial behaviour are introduced.

HENV 650 The Political-Economy of the City (3 credits)
This course explores the implications of economic globalization and neoliberalism for urban life in late capitalist (post-1970s) period. Drawing on literatures from the fields of planning, geography,

and political economy, it focuses on how urban policies and services are being restructured and how these changes affect different social groups

HENV 655 Environmental Modeling (3 credits)
The different approaches to modeling the bio-physical, built or human environment are examined. The conceptualization of simple models to examine how human interventions affect the environment is investigated. Different modeling approaches such as system models, computer visualization and simulation are covered. Students develop a model scheme related to their thesis topic.

HENV 660 Climate Change and Sustainable Development (3 credits)
This seminar examines the interface between human-driven global climate change, and the demands and challenges of developing sustainable human societies. Class discussions cover topics such as how the potential impacts of climate change affect sustainable development efforts, as well as the need to develop sustainable energy sources that do not further degrade the global climate system. The course also includes an overview of current literature in the fields of climate science and environmental sustainability.

HENV 665 Special Topics Seminar (3 credits)
This course is designed to meet the special needs of individual or groups of graduate students. Topics vary to permit investigation of current and developing theories and research areas. Content involves presentation, discussion, and critical analysis of information from relevant scientific literature. The course will also take advantage of visiting expertise.

HENV 670 Environmental Governance (3 credits)
This course examines the principles, practices and institutions involved in environmental conservation and management as well as the sustainable exploitation of natural resources. Topics include sustainability, the precautionary principle, social capital, adaptive capacity, common property resource theories, deliberative democracy, environmental justice and environmental conflict resolution. Attention is given to issues of scale, particularly the mismatch of spatial, temporal and functional scales that characterize unsustainable management and use practices.

HENV 675 Community Participation in Environmental Conservation (3 credits)
This course addresses the question of community participation in conservation and development initiatives. Focusing on the particular experience of local communities, it presents participatory concepts, principles, tools, and processes that have practical application to a broad range of contexts and settings.

HENV 680 Advanced Seminar in Environmental Science (3 credits)
This course provides an overview of current research in environmental and related scientific disciplines. The course involves seminars, presentations, and critical analysis of scientific literature, including discussion of cutting-edge research topics in fields such as ecological restoration, biodiversity, climate change, renewable energy, food and water security, and natural resource conservation.

HENV 690 Seminar in Social and Cultural Geography (3 credits)
This seminar introduces students to some important contemporary geographical approaches and topics in the study of society and culture. Specific themes may include globalization, migration, multiculturalism and diaspora, marginality, policing and imprisonment, and social movements. To provide a broad understanding of these themes, the course emphasizes analyses that draw upon geographical concepts of space, place, identity, and power.

8 DETAILED INFORMATION ON THE MASTER'S AND PH.D. THESIS

Students have the option of writing their Master's or Ph.D. theses in one of three formats: a traditional thesis, a manuscript-based thesis or a research-creation thesis. Please consult the Thesis Regulations at the School of Graduate Studies for submission:

http://www.concordia.ca/content/dam/sgs/docs/handbooks/thesispreparationguide.pdf

Students are required to consult the Graduate Program Calendar for submission dates to ensure timely graduation and appropriate submission dates for specific graduation periods.

8.1 M.SC.

Our Departmental process for preparing, submitting and defending a Master's Thesis is summarised below, with additional information available on the Concordia University Thesis Office website: https://www.concordia.ca/gradstudies/students/thesis-based/process.html

1. The Department of Geography, Planning and Environment requires that the form *Notification of Thesis Deposition* be submitted to the GPA approximately 6-8 weeks before the proposed defence date.

2. The Master's Thesis will normally not be more than 40,000 words (around 80 pages single-spaced, 120 pages at 1.5 line spacing or 160 pages double-spacing) in length. It is expected that the length of the written component of the research-creation thesis will be in the range of 15,000 words.

3. An electronic copy in both Word and PDF formats will be emailed to the GPA at least 3 weeks before the scheduled defence. The GPA will coordinate the sending of the thesis to both the external and internal examiners. Students are not to distribute copies of the thesis to the Examination Committee unless specifically instructed otherwise. If paper copies are required by any of the Examination Committee members, the GPA will notify the student that they must provide a spiral-bound copy directly to the examiner in question.

4. The Master's Thesis Examination Committee will consist of:
    - Faculty supervisor(s)
    - One internal examiner, selected from the two members of the thesis committee
    - One external examiner (from outside the Department and/or University)

5. The supervisor(s) will select the external examiner to serve on the Thesis Examination Committee, subject to approval by the Graduate Program Director.

6. Once selected, the external and internal examiners, as well as the supervisor, will be provided with the *Examiner's Preliminary Evaluation of a Master's Thesis* form.

7. A defence date will be set 3-4 weeks from the time the examination committee is provided with *Examiner's Preliminary Evaluation of a Master's Thesis.* This can be cancelled if the external examiner recommends against an oral defence of the Master's Thesis at this time.

8. The examination committee will evaluate the thesis and forward the *Examiner's Preliminary Evaluation of a Master's Thesis* to the Graduate Program Director at least one week prior to the scheduled defence date.

9. The Examining Committee can render one of two decisions, subject to a majority vote:

    1. Accepted: A thesis may be accepted as submitted or accepted with modifications (minor or major). Modifications are defined as revisions which can be made typically within six months and to the satisfaction of the supervisor.

    2. Not Accepted: A thesis may be re-submitted only once no more than 6 months after the initial defence date, to the same Examining Committee.

10. If the Master's Thesis Examination Committee recommends accepting a thesis after the oral defence with any modifications, the candidate must re-submit a final draft to their supervisor, based on the Committee's recommendation(s), with all necessary modifications and corrections. The supervisor will confirm with the GPA when all modifications and corrections have been done.

11. Students must then submit the final version of the Thesis Office electronically using Spectrum, Concordia University's Research Repository. They must also notify the GPA when Spectrum submission is complete. Students are encouraged to submit as soon as they can, and to remain in communication with the GPA, in order to have sufficient time to overcome any unexpected difficulties and facilitate graduation.

    The final version must contain all revisions required by the Examining Committee and/or formatting revisions required by the Thesis Office. The electronic submission must be in PDF/a format (archival PDF). A guide to preparing your thesis for deposit in Spectrum can be found here: https://www.concordia.ca/sgs/thesis-office/masters-thesis-route/5-spectrum-library-submission.html. Any non-text material that cannot be uploaded onto Spectrum must also be provided to the Thesis Office in a DVD/media format for deposit in the library. To deposit the thesis, students must log on to Spectrum using their Concordia Netname and password, and follow the instructions using the HELP button. They will be provided with detailed instructions. (http://spectrum.library.concordia.ca)

8.2 PH.D.

Ph.D. defences are administrated by Concordia University's Thesis Office and both students and supervisors should review their requirements by consulting this link: https://www.concordia.ca/gradstudies/students/thesis-based/process.html

Concordia requires that the Doctoral Thesis Examination Committee Form (https://www.concordia.ca/content/dam/sgs/docs/forms/phd-committee-form.pdf) be submitted to the Thesis Office (thesis@concordia.ca) with a copy to our department GPA 6-8 weeks before the proposed defence date.

Doctoral theses can take the form of a traditional chapter-based, manuscript-based on research creation thesis. Details for thesis preparation can be found in the Thesis Preparation Guide: https://www.concordia.ca/content/dam/sgs/docs/handbooks/thesispreparationguide.pdf

9 POLICY ON OFFICE SPACE FOR M.SC. AND PH.D. STUDENTS

The Department provides office space for research-based graduate students. Students working under the supervision of a faculty member with a research laboratory (https://www.concordia.ca/artsci/geography-planning-environment/research/labs.html) will be based in these lab spaces will have space reserved for them within the respective lab. Faculty members are expected to provide computers for their labs.

Students that are not supervised by a faculty member with dedicated space will be assigned to shared spaces, with shared computers, within the graduate student rooms in the department. Office space and computer access are for a duration of 6 terms (2 years) for M.Sc. students and of 12 terms (4 years) for Ph.D. students.

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